Arizona
Subcounty Population Projections Methodology for the 2006 to 2055

County level population projections are used as control totals for their respective subcounty projections. The regional councils of government have the option of preparing their own subcounty projections. At the present time, the Maricopa Association of Governments and the Pima Association of Governments prepare the subcounty projections in their regions. Arizona DES prepares the subcounty projections for the other 13 counties : Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Pinal, Santa Cruz, Yavapai, and Yuma.

Subcounty numbers are prepared for the following levels of geography: Census County Divisions (CCD), American Indian lands (AI), and all Census Designated Places (CDP).

The first step in the process is the preparation of 1990 population counts which are equivalent to current 2000 census boundaries. ArcGIS is used to overlay Census 2000 shapefiles of CCDs, CDPs, and AI lands on 1990 census block level shapefiles. The Summary File 1 (SF1) population counts for 1990 blocks which are contained by the current boundary are summed to provide an adjusted 1990 population. In this way, the effect of annexations occurring during the intercensal period, is minimized. Also, for places that were identified by the census in 2000 but not in 1990, it provides a starting point for evaluating historical growth.

A preliminary share-of-growth ratio is then determined, based on the 2000 Census and adjusted 1990 projection. There are set to zero population growth rate for smaller areas in which growth rate were negative while growth rate for the larger area were positive. The 2005 estimates are determined for each CCD, unincorporated CDP, and AI reservation.

For CDPs that cross CCD, AI, and/or county boundaries, a 2005 estimate is determined for each portion. For example, for Dewey-Humboldt, in Yavapai County, there are portions of the community located within three CCDs: the Humboldt CCD, Mingus Mountain CCD, and the Prescott CCD. The total for the community is therefore the sum of the three parts. Note: If a CDP is incorporated, the 2005 estimate is used as a control total.

Once the 2005 estimates for CCDs, CDPs, and AI lands are determined, their populations are projected based on a share-of-growth ratio method. Specifically, for each year of the projections, an area's share of that year's county population increase is determined by the growth rate that that area experienced since the last decennial census:

$$\text{CDP projection}_{\text{year i}} = \text{CDP pop}_{\text{year (i-1)}} + \{ (\text{County proj}_{\text{year i}} - \text{County proj}_{\text{year(i-1)}})$$

$$\text{X} \quad [(\text{CDP pop}_{\text{year i}} - \text{CDP pop}_{2000}) \; / \; (\text{County pop}_{\text{yeari}} - \text{County pop}_{2000})] \}$$

An underlying assumption is that the area's share of growth will remain the same throughout the projections period.